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(Text does not include verbatim comments)

Welcome

- Thank you for inviting me to be with you this afternoon.
- I want to extend a special thanks to the Western Michigan University Environmental Institute and Barb Wygant for this wonderful conference.
- I also want to thank our partners here today from Michigan. As we continue our commitment to the improvement of the St. Joseph River Basin, both of our states and their residents will reap the benefits for generations to come.
- And the setting for this conference could not be more appropriate than on the banks of the river itself at its southern most bend before it flows back into Michigan.
- It's a river that flows 210 miles through five counties in two states, falling 600 feet from its source to its mouth.
- From its headwaters near Hillsdale, Michigan, to its mouth at Lake Michigan, the St. Joseph River is one of the many but, perhaps, best threads that binds together the many diverse communities – urban and rural – on both sides of the state line into the, vibrant community called Michiana.

St. Joseph Basin Overview

- Today, I want to talk about the St. Joseph River Basin, giving you an overview of its population, land use, economy and its recreational and tourism opportunities.
- Also, I will tell you from the Indiana perspective what the Indiana Department of Environmental Management and many local governments and groups are doing to contribute to the watershed's health.
- The St. Joseph River Basin Commission summed it up best with its mission statement: The commission exists to conserve, enhance and promote the natural resources and benefits of the watershed for present and future generations by providing vision, leadership and means.
- The St. Joseph River Basin – its tributaries, its fish habitat, the opportunities it offers for commerce, agriculture, industry and recreation – are vital to the livelihood as well as the lifestyle of the inhabitants of Michiana.

Population

- As we look at this watershed, or any watershed in the world, the single greatest threat to water quality is man and his activities arising from agricultural, manufacturing and recreational activities.
- Today, the total population in the 15 counties in the St. Joseph River Basin – Indiana and Michigan – is about 1.5 million people, according to the 2000 Census.
- This area represents a significant population base in Indiana as well as Michigan.
- *According to the 2000 census, Indiana has the largest cities within the St. Joe Watershed with South Bend's population at 107,789; Mishawaka at 46,557; Elkhart at 51,874 and Goshen at 29,383. (Larger Michigan cities in the watershed include Niles with a population of 12,204; St. Joe – 8,789; Benton Harbor – 11,182)*
- Consequently, it becomes apparent and imperative that we must implement **today** the tools necessary **tomorrow** to ensure that this growing population recognizes the importance of the basin's health.

Land Use

- Roughly one-third of the watershed's 4,685 square miles lies in seven Indiana counties, so my state's contribution to improve and safeguard the river basin's water quality is vital and necessary.
- 72 percent of the St. Joseph River Basin (both Indiana & Michigan) is used primarily for agricultural activities.[1]
- Both Indiana and Michigan have significant agricultural and manufacturing activity and diversity and many of the leaders of these sectors are here in the St. Joseph River Basin.

  - Did you know that the St. Joseph River Basin leads the world in domestic duck production?
  - Or that three of Indiana's leading counties for cattle production – Elkhart, Kosciusko and LaGrange – is located within the river basin?
  - The basin also includes several of my state's leading hog producers.
  - And soybeans and corn are the primary crops produced in the watershed based on total acres.

Economics

- The Indiana counties in the St. Joseph River Basin account for 11 % of my state's workforce, or about 320,000 people.
- The basin is home to major employers, including world leaders in mobile home and recreational vehicle manufacturing as well as automobile parts and electronic controls and sensors.
- Across the state line in Michigan, the St. Joseph River cuts through one of the nation's premier orchard growing regions.

- Some of the major employers in the river basin include AM General, the University of Notre Dame, Fleetwood Industries and the fruit growers of Southwest Michigan.

Recreation/Tourism

- Recreation and tourism are another thriving aspect of the St. Joseph River Basin whether we talk about Indiana or Michigan.
- Many of these activities depend on the water quality. In Indiana, for example, we have:

    - A world class artificial kayak run along the East Race of the St. Joseph River, just across the river from this location. It's used for many competitions, even the Olympic Trials for kayaking.
    - *The river is also used to teach the Fast Water Rescue Course, a training course that creates flood-like situations by diverting the river with movable obstacles. The course teaches rescue workers how to effectively deal with rapid water situations.*
    - The Little Elkhart River, a tributary in the river basin, powers Indiana's oldest operating gristmill at Bonneyville Mill County Park in Elkhart County.
    - The final fish ladder of the first interstate-funded anadromous fisheries project is located in St. Joseph County, bringing steelhead trout and Chinook salmon to the area. Other fish ladders are located on the river at: Berrien Springs, Buchanan, Niles and Mishawaka.
    - The largest natural inland lake in Indiana – Lake Wawasee – is located in the St. Joseph River Basin.
    - Water-skiing and canoeing are major recreational events throughout the river basin and
    - The nationally ranked University of Notre Dame women's rowing team uses the St. Joseph River for practice.
    - I also know that Southwest Michigan is known for its many inland lakes that offer many recreational opportunities for Michiana residents.
    - And, of course, there is Lake Michigan, which is one of the greatest natural assets in the world.

Water Quality

- The St. Joseph River is like an artery running through this community, nourishing the community in many ways. It quickly becomes apparent that much depends upon the health of the river and the river basin.
- Water is a vital resource and its abundance in Michiana, whether we talk about the St. Joseph River, the area's many lakes or the significant aquifer that supplies much of the drinking water for thousands of residents, demonstrates how much people depend upon it.

- Former Senator Edmund Muskie said more than 30 years ago: "High quality water is more than the dream of the conservationists, more than a political slogan; high quality water, in the right quantity at the right place at the right time, is essential to health, recreation and economic development."
    - Did you know that residents in the watershed use more than 148 million gallons of ground water and surface water per day?
        - Now, that's a lot of water to "wrap your arms around" so let me put that figure into perspective.
        - It would take between 16 and 17 minutes for 148 million gallons of water to fall over the American falls at Niagara!
- This statistics demonstrates the importance of water and it's our job to protect and improve the basin's water quality and to address the issues that adversely impact it.
- And while Michiana is blessed with an abundant fresh water resource, this resource is finite. We must **protect** it.
- I hope that Michiana never experiences the Scottish Proverb that: "We'll never know the worth of water till the well goes dry."
- I think all of us in the room today understand the importance of water.

First step: Identifying impaired waterbodied

- While I will address what Indiana is doing to protect and improve the water quality of the basin, let me assure you that IDEM's counterpart in Michigan – the Department of Environmental Quality – is doing much the same work on its side of the state line.
- This past year, IDEM has identified within the basin 24 new rivers, streams and lakes as impaired waterbodies.
- These additions, coupled with the 17 waterbodies previously identified as impaired, brings to 41 the number of impaired waterbodies in Indiana in the St. Joseph River Basin.
- The major causes of water quality impairment in the basin are typical for an area that is primarily agricultural and manufacturing. Those impairments include:
    - Biochemical oxygen demand (BOD),
    - Nutrients (fertilizers and animal waste),
    - Chemicals from illegal dumping, urban stormwater run-off, pesticide applications and industrial effluent,
    - e. coli from failing septic systems, direct septic discharge, animal waste, improperly disinfected wastewater from treatment plants and
    - PCBs, a contaminant from transformers, sealants, paints, waste oil.
- All of these pollutants are found in the St. Joseph River Basin.

Emerging challenges to improve the basin's water quality

- We have made tremendous progress in cleaning up our nation's waters since Congress passed the Clean Water Act three decades ago. *October 18 is national*

water quality monitoring day, and 2002 has been dubbed "The Year of Clean Water" in recognition of the Clean Water Act's 30th anniversary.

- Our greatest progress has come in improving our wastewater treatment plants and while we have made progress, much work remains. In particular:
    - Nonpoint source pollution and
    - Combined sewer overflows

Nonpoint Source Pollution

- Pollution from these nonpoint sources poses a considerable threat to the water quality of the river and its tributaries.
- Unlike point source pollution, nonpoint pollution comes from a myriad of land-use activities, including land development, construction, crop production, animal feeding lots, failing septic systems and landfills.
- Others pollutants include e. coli bacteria, heavy metals, pesticides, oil and grease, and any other substances that may be washed off the ground or removed from the atmosphere and carried into surface waters.
- The magnitude of the problem is an eye-opener; for example, 29 million gallons of petroleum escapes into the oceans surrounding North America each year because of human activity.

    - Nearly 85 % of the petroleum comes from spills of gasoline and oil run-off from vehicles and from small boats and jet skis, according to National Academies National Research Council (Washington Post 5/23/02)
    - By comparison, only a tiny fraction of this environmentally damaging pollution comes from ruptured pipelines.

Combined Sewer Overflows

- And while we have improved our wastewater treatment facilities, the next challenge for point source pollution is reducing/eliminating combined sewer overflows.
- A combined sewer system funnels sanitary wastewater and storm water through a single pipe. This century-old technology discharges untreated sewage into our rivers during periods of excessive rainfall or snowmelt.
- CSOs pose a threat to the environment by introducing pollutants as well as pose a serious health threat to residents, especially children who play near CSO outfalls.
- While this type of pollution lends itself well to the regulatory approach, it is still a concern as the population grows and industry continues to expand in the St. Joseph River Basin to take advantage of the region's skilled workforce.
- Our primary enforcement tool to reduce/eliminate CSOs is the National Pollutant Discharge Elimination System Permit (NPDES) for municipal and industrial wastewater treatment plants and small domestic wastewater treatment plants.

- There are 181 active NPDES permits within the Indiana portion of the river basin.
- There are 16 communities in the river basin in Indiana that have a total of 152 CSO discharge points

    - This is not just a "big" city problem.
    - The city of South Bend, the largest community in the river basin, has the largest number of CSO points with 44.
    - 66 % of all of the CSOs on the Indiana side of the basin are located in its three largest cities – Elkhart, Mishawaka and South Bend.
    - But even smaller communities, like Kendallville, Avilla, Milford and Warsaw, have CSOs; each of these communities has at least one each.

So, what is IDEM doing to improve the water quality of the St. Joseph River Basin?

- Within IDEM, the Office of Water Quality's Assessment Branch is responsible for monitoring the quality of Indiana's lakes, rivers and streams.
- In 1996, IDEM began a five-year, rotating basin monitoring program of Indiana's 10 major watersheds.
    - We last surveyed the St. Joseph River Basin in 2000. I joined our survey crews as they worked the Little Elkhart River near Bonneyville Mill.
- Supplementing this physical survey information is data from the fixed-monitoring program.
- The fixed-monitoring program – there are six in the Indiana portion of the St. Joseph River Basin – details basic water quality trends and helps to determine the chemical, physical and biological characteristics of Indiana waters under changing conditions.
- With this information, we are able to gauge the health of the river basin and what conditions need to be addressed and whether fish consumption advisories are warranted.
- One area of concern that we are reviewing data for is the level of Atrazine, a widely used herbicide, found in the river basin.
- As we review data collected at pesticide monitoring stations from March through June of 2000 for the upcoming Great Lakes Pesticide Report, we will be able to determine the impact that Atrazine is having on water quality.
- We understand the importance on the Indiana side of the river basin of determining our state's contribution to the levels of Atrazine found in the basin and specifically our contribution of Atrazine to Lake Michigan.

More efforts to improve the water quality of the St. Joseph River Basin?

Ground Water Quality Rule

- In June 2001, the Indiana Water Pollution Control Board adopted the Ground Water Quality Standards Rule, the first such rule in the state's history.
- All ground water is classified as drinking water unless special classification is requested because of existing ground water contamination.
- These specific regulations will help us protect the future of Indiana's ground water and it provides a b foundation for state agencies, industries and natural resource professional to work from.

CFO rule

- The Water Pollution Control Board adopted Indiana's first-ever confined feeding operation rule which became effective March 2002.
- Prior to the rule's adoption, Indiana regulated its confined feeding operations since 1971 through a guidance document.
- There are about 3,000 CFOs in Indiana, 214 right here in the St. Joseph River Basin.
- The rule's principle purpose is to protect the state's waterways from contamination. Manure contains high levels of nitrogen that obviously is very bad for water quality and the health of aquatic life.
- Of the CFOs IDEM inspected over the past two years, an average of 95% had no or only minor maintenance problems.

MS4 Program

- Another important program in place to ensure improved water quality is the MS4 program.
- Municipal separate storm sewer systems, or MS4s, include everything from roads with drainage systems, municipal streets, curbs, gutters, ditches or storm drains which carry run-off when it rains or when snow and ice melt.
- The run-off drains, typically untreated, into lakes, rivers and streams.
- Run-off from urbanized areas is a source of pollution in 13 % of the nation's impaired waterways and 21 % of impaired lakes, ponds and reservoirs, according to the EPA's 1996 Water Quality Inventory Report.
- The federal Clean Water Act requires the MS4 Program and it will impact about 170 Hoosier communities and other urban entities in Indiana, such as universities and prisons.
- 17 entities in the St. Joseph River Basin are subject to the MS4 rule.
- These communities will need to implement six minimum control measures to reduce the amount of run-off pollutants entering our waterways, including waters in the St. Joseph River Basin. They are:

    - Promoting public education and outreach,
    - Encouraging public participation,
    - Illicit discharge detection and elimination,
    - Controlling construction site run-off control,

- Managing post-construction storm water and
- Preventing pollution from municipal operations, such as street sweeping, catch basin cleaning, salt/sand application to roads and material storage will need to be assessed.

What local groups and programs are in place to improve water quality?

- As people place more and new demands on the St. Joseph River and its tributaries, we must educate people that the river basin's water quality depends upon each of them.
- This is a challenge that is primarily cultural and not regulatory – we need to create a new environmental ethic.
- Many groups have already grasped this philosophy by deciding to take ownership in the river basin; for example:
    - The city of Elkhart is beginning a program to establish a watershed initiative between the three largest Indiana communities in the river basin.
    - Elkhart received more than $83,000 to work with Mishawaka and South Bend to develop a watershed water quality model to characterize sources of e. coli impacting the St. Joseph River.
    - The model will establish baseline water quality and characterize point and nonpoint sources of e. coli during dry and wet weather events.
    - The model will also incorporate input from major tributaries of the St. Joseph River, including Yellow Creek, Baugo Creek, Laing Creek and Bowman Creek.

- This information will be a great asset in developing a Total Maximum Daily Load or TMDL for e. coli for the St. Joseph River and its tributaries.
- There are many programs in place throughout the river basin that are possible with the support of IDEM, both financial and technical, through the Section 319 Nonpoint Source Grant program.
- The Nonpoint Source Grant Program helps provide the necessary tools to start a variety of programs at the local level to reduce the impact of nonpoint source pollution. For example,
- The **LaGrange County Solid Waste Management District** is spearheading a multi-county project providing assistance with livestock management.
- The district hired a livestock management specialist to provide educational, technical and financial assistance to land users and assists with developing livestock management plans.
- By educating individual land users about the environmental hazards that come with the territory of livestock management, we can work to ensure that these hazards, especially to water quality, are reduced.
- The **Michiana Area Council of Governments (MACOG)** received a $74,000 grant to develop a computer CD and corresponding printed material to educate builders and developers about construction site maintenance, sequencing of construction activities, erosion control and general site design.

- **MACOG** is also developing, in cooperation with local health departments, a video highlighting the care and maintenance of on-site sewage disposal systems.
    - It will distribute the video throughout the St. Joseph River Basin via libraries, health departments, title companies, real estate offices and other agencies involved in land transfer and land development within the river basin.

Conclusion

- I hope you can see from my remarks that the Indiana Department of Environmental Management is committed, along with its partners in this room today and the state of Michigan, to improving and protecting the waters of the St. Joseph River Basin.
- It's a big job, but I believe we have turned the corner. More and more people, whether they live in Indiana or Michigan, are attuned to environmental issues.
- The environment consistently ranks near the top of issues important to Americans. A Gallup Poll in March of this year showed that seven in 10 Americans are either active in or sympathetic to environmental issues.
- Former Pennsylvania Congressman Bud Shuster made a statement 15 years ago that is as true, if not truer, today: "Clean water is not an expenditure . . . clean water is an investment in the future."
- So as we continue to look for new and innovative ways to improve the St. Joseph River Basin, it's important that we do it together.

- Thank you for your investment in Michiana's future.

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[1] St. Joseph-Lake Michigan Watershed Restoration Action Strategy – Jan 2001 (p. 17)
[2] Dept. of Commerce Data and Statistics 2001
[3] St. Joseph-Lake Michigan Watershed Restoration Action Strategy Jan 2001 Table 2-6 (p. 22)
[4] Niagara Falls Thunder Alley Web site, American Falls
[5] IDEM NPDES Tracking Database